

REMARKS

By the above actions, claims 1, 7-9, 16, 18-22, 25, 28, 29, 35, 38-40 have been amended, and new claims 45 & 46 added. In view of these actions and the following remarks, further consideration of this application is now requested.

In accordance with MPEP § 713.04 & 37 CFR § 1.133 the substance of discussions held at a personal interview with the Examiner are set forth herein. No agreements were reached, and no substantive discussion of the prior art was conducted since the Examiner indicated that he was unprepared to do so and requested that all arguments be presented in written form; However, the Examiner more fully explained his positions relative to the § 112 rejections and based thereon, the independent claims have been amended as commented upon more fully below.

The declaration was objected to and a new declaration required. However, the objection and requirement are totally inappropriate. That is, if the Examiner will review the Declaration form, he will see that it is an official PTO form which has no place for the data that he believes needs to be on it, and that this form is for use with an Application Data Sheet. Furthermore, if the Examiner will review the file he will find that an Application Data Sheet (a copy of which is attached to this Amendment) was submitted which contains the data in question. Thus, since the applicant's Great Britain priority data was provided by way of an Application Data Sheet, no new Declaration should be required and the Examiner's objection and requirement should now be withdrawn.

With regard to the Examiner's rejections under the first paragraph of § 112, at the interview it was pointed out to the Examiner how the subject matter consider to lack support in the specification was, in fact, fully supported by the specification. In this regard, the Examiner's attention was directed to the non-elected, Fig. 6 embodiment in which the cylinder 3 is separate from the piston 6 and actuator 9 and in which the passageway 7 is also separate from the piston 6. At the interview, the Examiner indicated that, if the claims were not amended, he would withdraw the nonenablement rejection and change it to an indefiniteness rejection since he considered the claims to be an improper attempt to generically cover two different embodiments via language he consider to be unclear as to which embodiment was actually being claimed. Accordingly, the independent claims have been reworded so that they no longer expressly refer to either the actuator or the passageway,

and it is submitted that, as reworded, the claims are clear, definite, fully supported by the original disclosure and generic to all embodiments. In view of the amended language of the independent claims, various of the dependent claims have been amended so as to reflect the changes made to the claim(s) from which they depend. In view of the foregoing, withdrawal of the rejection under 35 U.S.C. § 112, first paragraph is in order and is now requested.

With regard to the rejection under 35 U.S.C. § 112, second paragraph for indefiniteness, the following is noted. With regard to the indefiniteness of claims 1 & 35, it was pointed out that no double inclusion exists, and with the above noted changes to claims 1 & 35, removing the express references to the actuator and the passageway, this issue has been rendered moot. With regard to claim 18, the term "highly" has been deleted so that the basis for the rejection thereof no longer exists. Likewise, relative to the "up to at least" language of claim 35, the "up to" portion thereof has been deleted, thereby eliminating any potential confusion. Since the grounds for this rejection have been fully addressed, the rejection for indefiniteness should now be withdrawn.

All of the claims to the elected specie stand rejected under 35 U.S.C. § 103 based upon the disclosure of the patent to Aftergut. This rejection is submitted to be inappropriate for the following reasons.

Firstly, the Examiner's dismissal of the specific diameters recited in the claims as being obvious to one of ordinary skill on the basis of the decision in the case of *In re Aller* as merely routine skill in the art in discovery the optimum or workable range for the general conditions disclosed by Aftergut is improper for several reasons.

First of all, it is pointed out that the *In re Aller* case related to a chemical process invention in which the difference relative to the prior art was changes in temperature and concentration were found to be minor changes that were "merely different in degree and not in kind from the reference process." (*In re Aller*, last page last paragraph.) Additionally, the particular position for which the Examiner has relied upon the *In re Aller* case was actually cited in the *In re Aller* decision by citation to the case of *In re Swain et al.*, 156 F.2d 239, 70 USPQ (BNA) 412, a chemical composition case in which one cellulose was substituted for another with no change in result.

Apart from the fact these cases appear to have been decided under the prior "invention" standard that was replaced by the "obviousness" standard of the 1952 Patent Act,

these decisions acknowledged that “changes such as these may impart patentability ... if the particular ranges claimed produce a new and unexpected result which is different in kind and not merely in degree from the results of the prior art,” *In re Aller*, at 235. That is, in fact, the situation in the present case where the Aftergut patent and the present invention use different values to obtain results which are different in kind, not merely of degree as will be commented upon more fully below.

However, even if the antique cases cited by the Examiner once represented good law, it is submitted that they do not represent the law of patentability as it now stands. In this respect, the Examiner’s attention is directed to the case of *In re Gordon*, 221 USPQ 1125 (Fed. Cir. 1984) which held that the mere fact that a modification could be made does not make it obvious absent a teaching of desirability, and the holding of the *Ex Parte Gerlach and Woerner*, 212 USPQ (BNA) 471 (USPTO Bd. of App. 1980) which, in a mechanical case, held that “[t]here is nothing in the statutes or the case law which makes ‘that which is in the capabilities of one skilled in the art’ synonymous with obvious” and since the Examiner was unable to provide a “reason why, absent the instant disclosure, one of ordinary skill in the art would be motivated to” make the change claimed, the Examiner’s rejection was reversed. It is submitted that such cases reflect the current state of the law and the fact that the Examiner is obligated to demonstrate why he considers a change to be obvious and that he cannot merely ignore claimed ranges without explaining why it would be obvious to use the claimed ranges in accordance with the teachings of the prior art. In this regard, in the present case, the Examiner has failed to take into consideration the teachings of Aftergut as the results sought to be obtained and has failed to explain how Aftergut could perform in the same manner taught with the ranges claimed by the present applicant, which ranges are designed to achieve entirely different results.

More specifically, the present invention comprises “an atomizer” that “is capable of atomising small doses of liquid in order to produce a ‘dry’ spray of liquid, i.e., a spray of liquid using much less solvent than prior art aerosol finger operated spray pumps” as noted in paragraph [0003]. This result is achieved by the finger operated spray pump according to the invention, by providing “an outer diameter of the piston and the corresponding inner diameter of the cylinder of between about 0.5 mm and about 4.0 mm, the nozzle-diameter(s) of the atomizer being between 15  $\mu$ m and 150  $\mu$ m, the operating pressure within the cylinder

during the spray stroke with average finger force being between 10 bar and 400 bar," as indicated in paragraph [0003]. Still further, as noted in paragraph [0004], a "smaller diameter of the piston leads to a higher pressure" being obtainable by the spray pump. Briefly summarized, the present invention seeks to maximize pressure to minimize the volume of liquid ("liquid dose per spray of between 5  $\mu$ l and 300  $\mu$ l, preferably between about 10  $\mu$ l and about 100  $\mu$ l, most preferably between about 20  $\mu$ l and about 50  $\mu$ l;" paragraph [0007]) in the atomized spray produced so as to produce a so-called "dry" spray.

In direct contrast, Aftergut teaches that he situates both the piston and cylinder above the container surrounding its neck for "giving the pump a relatively large diameter so that a relatively large volume of liquid can be pumped in a short stroke, i.e., a "wet" spray will be produced rather than a dry one. Thus, while the present applicant minimizes the size of his piston and cylinder unit to drive up pressure and minimize fluid discharge, Aftergut has designed his sprayer to perform in the exact opposite manner. How could it have been obvious to one of ordinary skill in the art to apply the ranges claimed by the present applicant to the sprayer of Aftergut when it would render it unsuitable for Aftergut's purpose of maximizing the volume of liquid discharged with a short stroke. Furthermore, since Aftergut is a high volume, low pressure sprayer, there is no reason for anyone to make his sprayer of materials which can "withstand an operating pressure of at least about 100 bar" as is disclosed and claimed by the present applicant.

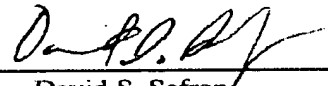
Still further, the piston and cylinder of the present invention have a diameter of between "0.5 mm and about 4.0 mm" in claim 1 and "1.5 mm and about 2.5 mm" in claim 35. Bearing in mind that the piston and cylinder of Aftergut are expressly taught to be larger than the mouth of the bottle that it is designed for use on so as to surround its neck, inquiry is made of the Examiner as to what bottles of the type shown by Aftergut are known to exist which have a neck that is less than 1.5 to 4 mm as would be necessary for a piston and cylinder in accordance with Aftergut's teaching to have dimensions in the range called for by the present applicant? Even then, given Aftergut's desire to produce a large volume discharge, why would his teaching lead to the use of a nozzle having a diameter of between 15  $\mu$ m and 150  $\mu$ m, which would severely restrict the output volume contrary to Aftergut's high volume goal? Such a diameter nozzle only makes sense in the context of the present inventor's goal of achieving a "dry" spray having a minimal liquid content.

On the basis of the foregoing, it should be readily apparent that applicant's difference in dimensions leads to a result that is different in kind (dry vs. wet spray), not merely degree relative to Aftergut's sprayer, and that anyone following Aftergut's teachings would be led away from those conditions found to be critical in accordance with the present invention. Thus, the present invention cannot be considered to be obvious from the teachings of the Aftergut patent and the rejection based thereon should be withdrawn, such action being hereby requested.

As for the rejections based upon the combination of the Aftergut patent with either the Nozawa et al. (claim 23) or Corsette (claim 26) patents, there is nothing in the disclosure of these patents which can overcome the serious deficiencies in the Examiner's reliance on the Aftergut patent commented upon above. For example, the Nozawa et al. patent is merely relied upon as a teaching of the use of a filter. However, even equipped with a filter, Aftergut's sprayer would still differ from the present invention in all of the above set forth manners which would preclude anyone from finding the present invention obvious based on its disclosure. Similarly, Corsette is merely relied upon as a teaching of the use of a vent opening. But, even with a vent opening no one could be led to the present invention based upon Aftergut's disclosure. Thus, these rejections should also be withdrawn and such action is now requested.

While the present application is now believed to be in condition for allowance, should the Examiner find some issue to remain unresolved, or should any new issues arise, which could be eliminated through discussions with applicant's representative, then the Examiner is invited to contact the undersigned by telephone in order that the further prosecution of this application can thereby be expedited.

Respectfully submitted,

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